**Building A Structure: Analysis of Created Product: Blue Print**

Teacher Name: Student Name:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **CATEGORY** | **4** | **3** | **2** | **1** |
| Mathematical computation | All instances with geometric computation are correct. Example: If a triangle is inscribed, then all angles depicted are correct. All measurements of perimeter and area are correct, etc. | Few errors in mathematical computation. | At least 10 errors in mathematical computation. | More than 10 errors in mathematical computation. |
| Mathematical usage of tools | All drawn geometric shapes have been drawn using geometric construction techniques and tools (compass and straight edge). Shows a clear understanding of how to construct geometric figures. | 80% of drawn geometric shapes have been drawn using geometric construction techniques and tools (compass and straight edge). Shows a clear understanding of how to construct geometric figures. | 70% of drawn geometric shapes have been drawn using geometric construction techniques and tools (compass and straight edge). Shows a surface level understanding of how to construct geometric figures. | 60% or below of drawn geometric shapes have been drawn using geometric construction techniques and tools (compass and straight edge). Shows a shallow understanding of geometric construction. |
| Mathematical usage of geometry on blueprint and in paper. | Plans for the structure show a strong understanding of how geometric figures relate to a circle in the correct manner. All mathematical analysis is correct and makes sense. All measurements are correct. | Plans for the structure show an understanding of how geometric figures relate to a circle in the correct manner. 80% of mathematical analysis is correct and makes sense. Most measurements are correct. | Plans for the structure show little understanding of how geometric figures relate to a circle in the correct manner. 70% of mathematical analysis is correct and makes sense. Many measurements are incorrect. | Plans for the structure show very little to no understanding of how geometric figures relate to a circle in the correct manner. 69% or below of mathematical analysis is correct and makes sense. |

**Computations:**

Teacher Name: Student Name:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| CATEGORY | 4 | 3 | 2 | 1 |
| Mathematical Concepts | Explanation shows complete understanding of the mathematical concepts used to solve the problem(s). | Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s). | Explanation shows some understanding of the mathematical concepts needed to solve the problem(s). | Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written. |
| Mathematical Reasoning | Uses complex and refined mathematical reasoning. | Uses effective mathematical reasoning. | Some evidence of mathematical reasoning. | Little evidence of mathematical reasoning. |
| Mathematical Errors | 90-100% of the steps and solutions have no mathematical errors. | Almost all (85-89%) of the steps and solutions have no mathematical errors. | Most (75-84%) of the steps and solutions have no mathematical errors. | More than 75% of the steps and solutions have mathematical errors. |
| Mathematical Terminology and Notation | Correct terminology and notation are always used, making it easy to understand what was done. | Correct terminology and notation are usually used, making it fairly easy to understand what was done. | Correct terminology and notation are used, but it is sometimes not easy to understand what was done. | There is little use, or a lot of inappropriate use, of terminology and notation. |
| Strategy/  Procedures | Typically uses an efficient and effective strategy to solve the problem(s). | Typically uses an effective strategy to solve the problem(s). | Sometimes uses an effective strategy to solve problems, but does not do it consistently. | Rarely uses an effective strategy to solve problems. |

**Oral Presentation Rubric : Architecture Project**

Teacher Name: Student Name:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| CATEGORY | 4 | 3 | 2 | 1 |
| Vocabulary | Uses vocabulary appropriate for the audience. Extends audience vocabulary by defining words that might be new to most of the audience. | Uses vocabulary appropriate for the audience. Includes 1-2 words that might be new to most of the audience, but does not define them. | Uses vocabulary appropriate for the audience. Does not include any vocabulary that might be new to the audience. | Uses several (5 or more) words or phrases that are not understood by the audience. |
| Time-Limit | Presentation is 3 minutes long. | Presentation is 2 minutes long. | Presentation is 1 minutes long. | Presentation is less than 1 minutes OR more than 3 minutes. |
| Content | Shows a full understanding of the topic, both geometric and economic. | Shows a good understanding of the topic, both geometric and economic. | Shows a good understanding of parts of the topic, both geometric and economic. | Does not seem to understand the topic very well. |
| Evaluates Peers | Fills out peer evaluation completely and always gives scores based on the presentation rather than other factors (e.g., person is a close friend). | Fills out almost all of the peer evaluation and always gives scores based on the presentation rather than other factors (e.g., person is a close friend). | Fills out most of the peer evaluation and always gives scores based on the presentation rather than other factors (e.g., person is a close friend). | Fills out most of the peer evaluation but scoring appears to be biased. |

**Student Self-Assessment and Reflection**:

Students will write a few short journal entries to reflect on their work and demonstrate understanding.

They will be asked to write about:

* How do you feel about the unit so far?
* What is the easiest concept for you to understand, what is the most difficult?
* Explain a concept in your own words.
* How does what we learned today relate to real life?
* How did you do this week?

At the end of the project, students will reflect on how much work they have done. They will be expected to give other groups a grade for their work as well.

Students will ask themselves:

* What parts of the project did I contribute to?
* What could I have done more on?
* What did I learn from this project?
* How did the circles make creating the building more difficult?
* How did the budget make creating the building more difficult?
* What other subjects did I have to use to complete this project?
* How will this project and unit help me later on in life?
* Did performing in front of an audience cause me to pay attention to the information more closely?
* Did working with a group of peers help me to understand concepts I didn’t understand before?

Group project peer analysis questionnaire:

* What parts did I contribute to, what parts did the others do?
* Who did not do anything?
* Who helped you the most when it came to understanding the mathematical analysis?

As a group, how did you think you did? Rate your group on a scale of 1-10, with one being the lowest and ten being the highest.